The Bulb Eater®

Fluorescent Lamp Crushing System

Models 55 VRS-U Premium, 55 VRS Premium, and CFL-Premium

AIRCYCLE
CORPORATION

WWW.AIRCYCLE.COM | 800.909.9709 | INFO@AIRCYCLE.COM

Purpose and Function of Manual

The owner's user manual contains all essential information for the user to make full use of the information on the Bulb Eater®. This manual includes:

- Description of the Standard Safety Symbols and Safety Systems used.
- System Functions.
- Assembly & Operations
- Maintenance & Trouble Shooting.
- Parts & Accessories
- Reference Materials & Forms
- Step by Step Procedures

Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.

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4/16/2013

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IMPORTANT SAFETY INFORMATION

ATTENTION!

Read all safety rules carefully before attempting to operate. Retain for future reference.

DANGER!

Never operate this unit when flammable materials or vapors are present because electrical devices produce arcs or sparks that can cause a fire or explosion.

NEVER OPERATE UNATTENDED!

WARNING

Inspect the Bulb Eater® prior to any use. Check for external damage that might have occurred during transit. *Be careful of moving parts*.

Report any damage

BULB EATER® SAFETY LABELS

DANGER Danger indicates an imminently hazardous situation which, if not avoided, *will* result in death or serious injury.

WARNING Warning indicates a potentially hazardous situation which, if not avoided, *could* result in death or serious injury.

CAUTION Caution indicates a potentially hazardous situation which, if not avoided, *could* result in minor or moderate injury.

IMPORTANT Important indicates important information that if not followed, may cause damage to equipment or operator.

Caution
Always wear ear and eye protection
Fill drum with crushed lamps ONLY
(Used Bulb Eater® filters may be placed on top of crushed lamps inside drum)

STANDARD SAFETY SYMBOLS

Warning, keep hands out of the machine.

Warning, indicates hazardous voltage.

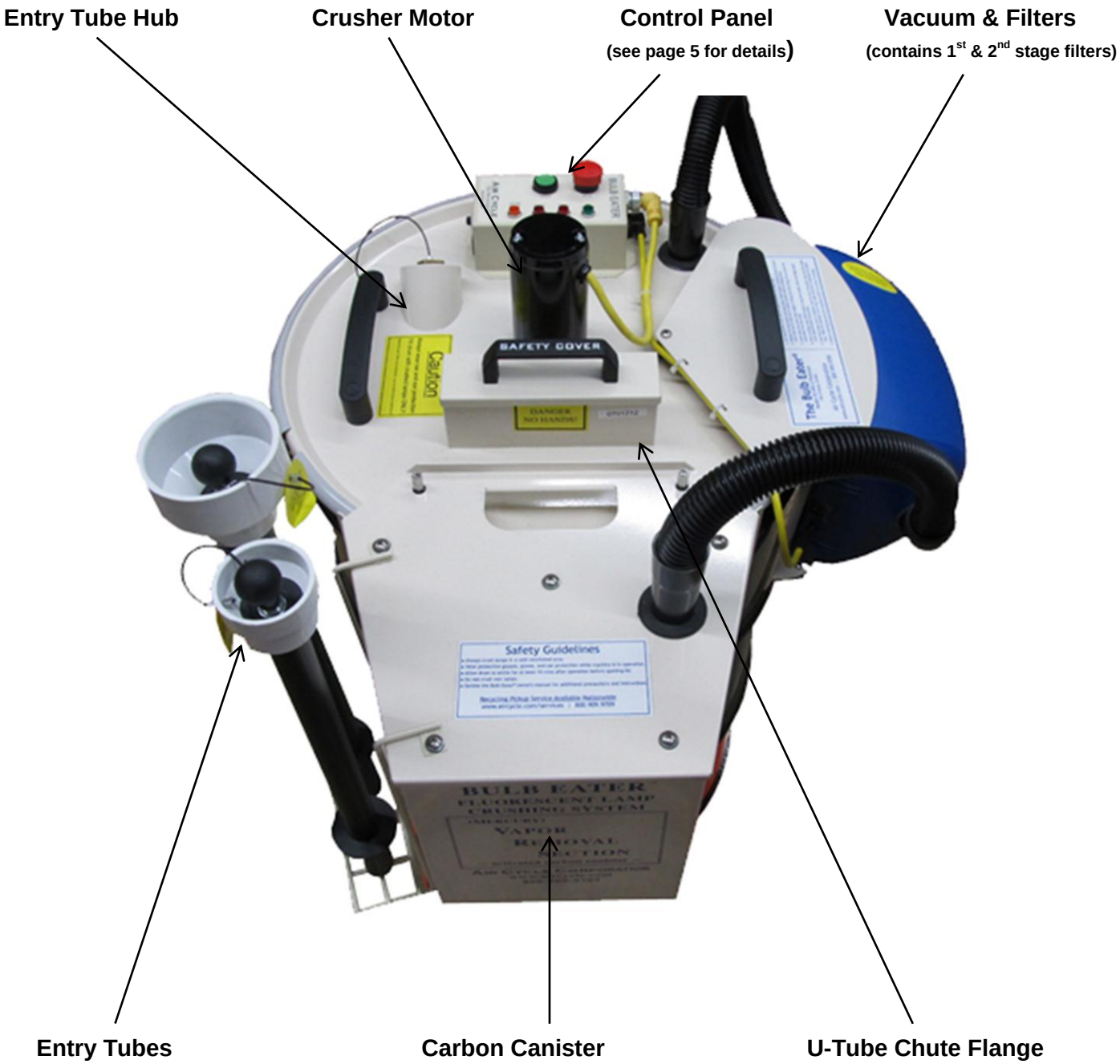
Important, Hearing & Vision Protection.

Important, Hand Protection

Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.

The VRS-(U) Premium Bulb Eater®

The VRS-U Premium Bulb Eater is capable of crushing any size straight fluorescent lamp as well as u-tube fluorescent lamps. Compact fluorescent lamps cannot be crushed with the VRS-U model.



Not pictured

Spinner Assembly
(located on underside of lid)

1st Stage Filter

2nd Stage Filter

U-Tube Chute
(attaches on U-Tube Flange)

The CFL Premium Bulb Eater®

The CFL Premium Bulb Eater® is available in select areas of the United States and internationally and is capable of crushing any size straight fluorescent lamp as well as compact fluorescent lamps. U-tube lamps cannot be crushed with the CFL Premium model.

Entry Tube Hub
(next to crusher motor, not pictured)

Crusher Motor

Control Panel
(see page 5 for details)

Vacuum & Filters
(contains 1st & 2nd stage filters)

Entry Tubes
(on storage rack)

Carbon Canister

Safety Cover

CFL Chute

Not pictured

Spinner Assembly
(located on underside of lid)

1st Stage Filter

2nd Stage Filter

Premium Bulb Eater® Control Panel

Stop Switch
Push to stop
Twist to release.

Power Outlets
Vacuum & Motor

Power On
Power is present when lit.

Lid Open
Stops system when the lid is lifted off the drum.

Start Switch
Only operates if the stop switch is released.

Full Drum
Stops system when the fragments reach the sensor

Drum Open Delay
The crusher motor stops with the stop button, but the filtration system will continue to purge the vapors from the drum for approximately 30 seconds.

Premium Bulb Eater® Parts Included w/ Machine

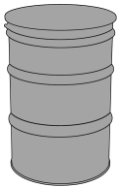
The VRS-(U) Premium Bulb Eater® Parts List:	**Quantity**
1. Motor	1
2. Vacuum Bracket	1
3. Handle with brass plug	1
4. Sensor lid open & full drum	1
5. Carbon Canister	1
6. Spinner Assembly	1
7. Control Box	1
8. Locking Ring & Bolt	1
9. U-Tube Chute	1
10. T-8/T12 Holder	1
11. Vacuum Assembly	1
12. Filter Bags (10 pack)	2
13. Inlet Hose	1
14. Clean Up Hose	1
15. Safety Gloves (2 Pairs)	2
16. Safety Glasses	2
17. Ear Plugs (2 Pairs)	2

The CFL Premium Bulb Eater® Parts List:	**Quantity**
1. Motor	1
2. Vacuum Bracket	1
3. Handle with brass plug	1
4. Sensor lid open & full drum	1
5. Carbon Canister	1
6. Spinner Assembly	1
7. Control Box	1
8. Locking Ring & Bolt	1
9. CFL Chute	1
10. T-8/T12 Holder	1
11. Vacuum Assembly	1
12. Filter Bags (10 pack)	2
13. Inlet Hose	1
14. Clean Up Hose	1
15. Safety Gloves (2 Pairs)	2
16. Safety Glasses	2
17. Ear Plugs (2 Pairs)	2

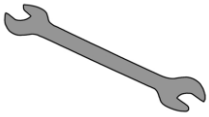
*Other accessory parts are available from the parts list

Premium Bulb Eater® Assembly Instructions

What You'll Need:

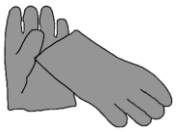


55-Gallon Drum



15-16th wrench or socket

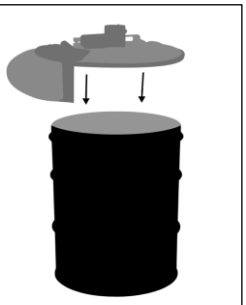
Safety Glasses



Safety Gloves

Instructions:

1. Mount the Bulb Eater® onto the drum, tightening the bolt ring with a 15/16" wrench or socket.
2. Unscrew the cap on the entry tube hub and screw the entry tube into the lid.
3. Connect the vacuum hose to the drum lid by inserting the nozzle end into the black rubber grommet on the drum lid and screwing the other end into the hole on the right side of the blue filter case.
4. Remove the carbon bag from the beige carbon canister and slowly pour the activated carbon granules into the carbon canister.
5. Attach the lid and entry tube rack to the carbon canister – Use rubber grommets between the entry tube rack and lid and align all screws before tightening.
6. Hang the canister on the drum edge on the small standoffs provided as hooks.
7. Plug in the hose from the blue vacuum into the black rubber grommet on top of the carbon canister to complete the filtration system. Make sure the nozzle is pushed in deep for a good seal.
8. Finally, connect the power cord to the control panel on your Bulb Eater® and plug it into an outlet.



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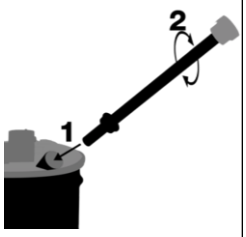

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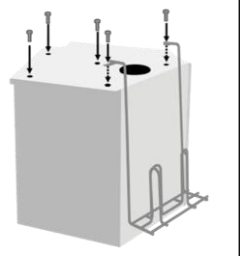

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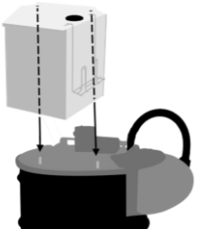

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IMPORTANT: Electrical Requirements
120V* / Single Phase / 50HZ or 60HZ
Must be protected by a minimum of 15 amp fuse or circuit breaker
*Except when using a manufacturer-provided 220V step-down transformer

Watch the Bulb Eater® Training Video at:
www.aircycle.com/videos

VRS-(U) Premium Bulb Eater® Operating Procedures

Before Operating the VRS-(U) Bulb Eater®

- Communicate/understand potential hazards by having operators review pages 18-23 of this manual and complete online training program at www.BulbEaterTraining.com
- Before crushing, label drum as containing Mercury (D009) and as either Hazardous Waste or Universal Waste depending on your state requirements
- Crush lamps in a well-ventilated area
- Wear safety glasses, protective gloves, and ear protection
- Screw in appropriate entry tube for lamp diameter
- Remove rubber plug from top of entry tube
- Crush only straight fluorescent and u-tube lamps

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1. Release the stop switch and press green START button. Confirm suction at top of entry tube and air flow out of carbon canister before crushing lamps.
2. Insert lamp into entry tube and then let go. Do not force the lamp down the entry tube.
3. After crushing, press STOP button to stop the crusher motor and begin purge cycle (approximately 30 seconds).
4. Once the purge cycle is complete, seal the top of the entry tube with the rubber plug. When the machine is not in use, make sure that all openings are sealed.
5. Before removing lid: Let the machine sit OFF for at least 15 minutes after the purge cycle is done to allow dust to settle before opening the lid.

ATTENTION:
Drum MUST be kept closed at all times
Do NOT crush more than one full drum of lamps per 8-hour period

Recycling Full Drums

Schedule a Recycling Pickup

- Call Air Cycle at 800.909.9709
- Schedule a pickup online at www.aircycle.com/services
- Use the “Pickup Request Form” located in the Forms & Reference section of this manual

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Air Cycle offers bulk pickup service to allow you to continue enjoying cost-effective recycling solutions after you have crushed your lamps, conserve your storage space, save money over other recycling solutions, and help keep our environment clean.

With Air Cycle’s Crushed Lamp Bulk Pickups You Can:

- Have large amounts of crushed lamps picked up
- Recycle various types of universal waste with a single pickup (including batteries, ballasts, and electronics)
- Track your recycling progress online 24/7 with online recycling reports
- Certify your progress for regulatory or management review with Recycling

CFL Premium Bulb Eater® Operating Procedures

Before Operating the CFL Premium Bulb Eater®

- Communicate/understand potential hazards by having operators review pages 18-23 of this manual and complete online training program at www.BulbEaterTraining.com
- Before crushing, label drum as containing Mercury (D009) and as either Hazardous Waste or Universal Waste depending on your state requirements
- Crush lamps in a well-ventilated area
- Wear safety glasses, protective gloves, and ear protection
- Attach and secure the CFL chute (CFL chute should be attached whenever machine is operated)
- If crushing straight lamps: screw in appropriate entry tube for lamp diameter & remove rubber stopper Insert lamp into entry tube and then let go. Do not force the lamp down the entry tube.
- If crushing CFLs: open CFL chute safety cover and seal entry tube or entry tube hub
- Crush only straight and compact fluorescent lamps

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1. Release the stop switch and press green START button. Confirm air flow out of carbon canister and suction at top of entry tube (if crushing straight lamps) before crushing lamps.
2. Crush Lamps.
    a. Straight Lamps:
        i. Make sure that the CFL chute safety cover is closed.
        ii. Insert a lamp into entry tube roughly 3 inches and then let go. Do not force the lamp down the entry tube.
    b. CFLs:
        i. Open safety cover
        ii. Place bulbs in the CFL chute individually (larger bulbs) or in small batches.
3. After crushing, press STOP button to stop the crusher motor and begin purge cycle (approximately 30 seconds).
4. Once the purge cycle is complete, seal the top of the entry tube with the rubber plug and close the CFL chute safety cover. When the machine is not in use, make sure that all openings are sealed (sealed entry tubes and CFL chute may remain on the machine when not in operation)
5. Before removing lid: Let the machine sit OFF for at least 15 minutes after the purge cycle is done to allow dust to settle before opening the lid.

ATTENTION:

Drum MUST be kept closed at all times

Do NOT crush more than one full drum of lamps per 8-hour period

Filter Replacement Procedures

1st Stage Bag Filter must be changed a minimum of twice per full drum of crushed lamps
2nd Stage HEPA Filter must be changed at least once every 10 drums of crushed lamps
3rd Stage Carbon Filter:

Spent filters must NEVER be left exposed. Spent filters must either remain in the blue vacuum case attached to the unit, be sealed in a full drum of crushed lamps, or bagged in a zip-top bag to avoid mercury release. DO NOT DISPOSE OF FILTERS IN THE TRASH.

- Communicate/understand potential hazards by having operators review pages 18-23 of this manual and complete online training program at www.BulbEaterTraining.com
- Confirm that the Bulb Eater® is clearly "off" and not operating.
- The operator must wear safety glasses and gloves when changing any of the three Bulb Eater® filters

Replacing the 1st Stage filter:

1. Locate the right-hand door on the blue filter case of the Bulb Eater®.
2. Remove black nozzle from blue door and immediately cap the end of the black nozzle to prevent dust from falling to the floor.
3. Press the yellow label marked PUSH on the far most right edge of the curved blue vacuum case to open the filter case door.
4. Carefully remove the door from the blue filter case.
5. Immediately place a circular white label from your Bulb Eater® filter kit over the center hole on the front of the 1st Stage filter. This prevents mercury-laden dust from escaping during the change-out process.
6. With the 1st Stage filter safely covered with the white label, grab each side of the brown cardboard front of the filter with both hands.
7. Carefully pull the 1st Stage filter slowly out of the blue vacuum case and place it on top of the full drum of crushed lamps (within the drum) or store in a zip-top bag if drum is not yet full. Avoid compression of the filter to minimize the release of mercury-laden dust.
8. Insert a new filter into the filter case, making sure the cardboard "front" is securely in place and the bag portion of the filter is unfolded and beside the cartridge, not rolled up in front of the cartridge.
9. Replace the blue door and verify that it is latched.

Replacing the 2nd Stage HEPA filter:

1. Follow steps 1 through 7 above to remove the 1st Stage Filter
2. Locate the 2nd Stage filter in the middle of the blue case.
3. Rotate the filter a quarter turn counter-clockwise.
4. Once the HEPA cartridge is free, carefully remove it from the blue filter case and place it in the full drum along with the crushed lamps and 1st Stage filters for disposal.
5. Replace both filters and replace the blue door, verifying that the door is secure.

Replacing the 3rd Stage Carbon Canister filter:

1. Unplug the hose from the tip of the carbon canister at the grommeted opening.
2. Remove the used canister from the standoffs on the lid of the machine and place duct tape over the open grommeted hole to prevent carbon spillage. It is recommended that the canister be placed into a DOT-approved, appropriately-sized container, and sealed. (A 55-gallon DOT metal drum may be the most convenient and cost effective). The used carbon canister should be placed into the shipping container immediately upon removal from the Bulb Eater®. Once the canister is removed, a determination should be made of the waste type in accordance with applicable local, state, and federal regulations. Also, be sure to manage, store, and label the container accordingly.
3. Remove the carbon bag form the new beige carbon canister and slowly pour the activated carbon granules into the carbon canister.
4. Hang the new carbon canister on the standoffs on the lid of the machine.

5. Plug in the hose from the blue vacuum into the black grommet on top of the new carbon canister to complete the filtration system. Make sure the nozzle is pushed in tightly for a good seal.
6. Call Air Cycle Corporation (800-909-9709) for a proposal for the processing of the used cargon canister. The most cost effective way to handle the canister is to include it with the pick-up of your drum(s) of crushed lamps.

ATTENTION:

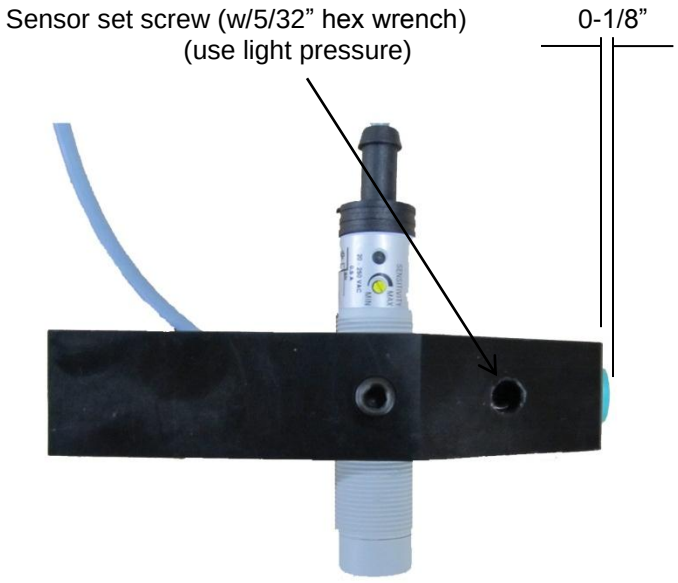
Only lamps and filters, placed on top of the crushed lamps, can be inside the drum. Do not place any extraneous materials or liquids in the drum. Presence of these materials with the crushed lamp waste could result in very significant upcharges or potential return of the waste to your facility.

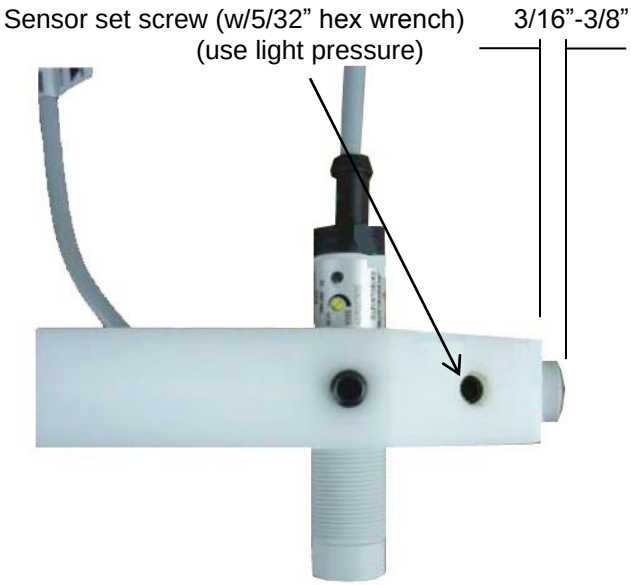
NOTE: Bulb Eater users in the state of Tennessee are required to ship spent filters in DOT containers **separate** from the drums of crushed lamps.

Adjusting the Lid Sensor

Use these tools to adjust the open lid and full drum sensors.

- If the "Open Lid" light remains on while the lid is closed, use the 5/32" hex wrench to adjust the black lid sensor to extend 0"-1/8" & the white lid sensor to extend 3/16"-3/8" from the sensor housing.
- If necessary, use the included screwdriver to adjust the sensitivity on the full drum sensor. The factory setting is minimum sensitivity. (Remove control box cover to access sensitivity screw. Reseal bottom of the control box when replacing)





Spinner Replacement Procedures

Communicate/understand potential hazards by having operators review pages 18-23 of this manual and complete online training program at www.BulbEaterTraining.com

When the Crusher Motor exhibits excessive vibration, the spinner assembly should be changed.

Gloves and eye protection should be worn while changing the spinner.

With the Bulb Eater® on a clean, empty drum:

1. Carefully stand the Bulb Eater® on edge. **Figure 1**
2. With a 5/32" allen wrench, loosen the set screw holding the spinner on the motor shaft.
3. Slide off the old spinner and replace with new spinner in the same position. **Figure 2**
4. Tighten the set screw firmly to secure the spinner to the motor shaft. **Figure 3**

FIG. 1

FIG. 2

FIG. 3

Troubleshooting the Bulb Eater®

Carefully following the instructions and guidelines in this manual is the best way to keep your Bulb Eater® working properly. However, should you encounter problems, this guide will help you resolve issues that occasionally arise during normal use of the Bulb Eater®. If you are experiencing a problem that is not addressed here or if your problem persists after following these suggested procedures, do not hesitate to contact us at 800.909.9709 or info@aircycle.com for further assistance.

General Use

Bulb Eater® runs with low suction or is overheating

Low suction and overheating can be an indication that your 1st stage bag filter or 2nd stage HEPA filters need to be changed. In ideal conditions, crushing clean bulbs, 1st stage bag filters should be changed a minimum of twice per full drum of crushed lamps and the 2nd stage HEPA filters, every 10 drums. However, dirty bulbs and various environmental conditions can cause filters to fill more quickly.

1. Replace the 1st stage bag filter (instructions can be found in the Maintenance & Troubleshooting section)
2. If the problem persists, replace the 2nd stage HEPA filter.

Control Panel Lights

"**Power" light does not illuminate when machine is plugged in and is operating**

If your Bulb Eater® functions normally when plugged in but the power light does not illuminate, you likely have a faulty light. The Bulb Eater® will function properly with a faulty power light; you can continue using The Bulb Eater with no changes.

"Lid Open" light is on when the Bulb Eater® properly secured to drum

The lid open sensor is a safety shut off to prevent the operation of the machine if it is not installed on a drum.

If the light is lit when the lid is installed properly:

• If your machine has a white sensor block (found on the underside of the Bulb Eater lid) – Follow the instructions found on page 11.

• If your machine has a black sensor block – Remove the set screw retaining the sensor and with a small screwdriver set, slide the sensor out so it is flush with the end of the block. Then reinstall the set screw to lightly hold the sensor in place.

Operating Tips

1. Do not force lamps down the entry tube. The Bulb Eater's vacuum suction should be sufficient to pull the lamps into the machine.
2. Ensure that you always crush lamps using appropriately sized entry tubes to minimize external breakage. Entry tubes are available at www.aircycle.com for a wide variety of lamp sizes.
3. If you are crushing lamps with significantly blackened ends, feed the lamps blackened end first. These portions of glass are slightly weaker and more prone to breakage outside the machine.
4. Crushing lamps that have previously been taped together can result in a buildup of adhesive in the Bulb Eater® entry tubes and cause breakage. Remove the entry tube from the machine and clean the inside of the tube with a rag soaked in an appropriate solvent like paint thinner.

Still having problems? Contact Air Cycle at 800.909.9709

Frequently Asked Questions

Bulb Eater® users typically find the machine very easy to set up and use. However, we recognize that sometimes our customers have questions about their machines. Below is a list of frequently asked questions that address many common inquiries that we receive. If you require additional assistance please feel free to contact us at any time by phone at 800.909.9709, through email at info@aircycle.com ,or by visiting www.aircycle.com/resources/FAQ

What type of lamps can I crush with the Bulb Eater®?

All models of the Bulb Eater® will crush any size straight fluorescent lamps. In addition to these, the VRS-U Premium Bulb Eater® is capable of crushing u-tube lamps; the CFL Premium Bulb Eater® is capable of crushing compact fluorescent lamps. U-tube and compact fluorescent lamps should only be crushed using machines designed to crush the specific lamp type.

What dangerous materials are in fluorescent lamps?

Lamps contain many different components and materials, but the only one that is toxic is mercury. Each lamp typically contains 10-20 mg of mercury, some of which is evaporated. However, other components and materials of the lamp, such as the glass or powdered phosphors, can be contaminated by the mercury during the life of the lamp. More information on mercury and disposal regulations can be found in the reference section of this manual.

How does the Bulb Eater® remove mercury while crushing lamps?

Your Bulb Eater® will remove virtually all airborne powder and mercury vapor while crushing a lamp (over 99%). The Bulb Eater® filters the powder in two stages, with a bag filter and a High Efficiency Particulate Arrestor (HEPA) filter. The first stage bag filter removes 99% of the dust and larger particles from the air. The second stage HEPA filters out the remaining small particles. The HEPA has been shown to capture at least 99.97% of powder with particle sizes of 0.3 microns or greater. The Bulb Eater® filters mercury-containing vapors through a filter of activated carbon.

How often should filters be changed?

1st Stage Bag filter: should be changed a minimum of twice with every full drum of crushed lamps. Change when the drum is half full and again when it is entirely full. The Bulb Eater® must be operated with the bag filter in place or the HEPA filter will be ruined.

1st & 2nd Stage HEPA filter: should be changed every 10 full drums.

Carbon filter: The calculated life expectancy for the activated carbon is approximately one million T12 4 ft lamps.

Using the filter log included in this manual will help you keep track of when filters should be changed out. Keep in mind crushing bulbs with heavy dust or other materials on them may require filters to be changed more often than the guidelines above.
Refer to page 10 of the owner's manual for filter-replacement instructions.

Does the spinner assembly need to be changed?

The breaking chain spinner should be changed as needed. Uneven wear causes heavy vibration.
Refer to the Maintenance & Troubleshooting section of the owner's manual for spinner-changing instructions.

What do I do when my drum is full?

First, let the machine sit "off" for at least 15 minutes before opening the lid. This allows for dust to settle inside the drum. Once the Bulb Eater® is removed from the top of the drum it is strongly recommended that the drum be resealed as quickly as possible to minimize potential release of remaining mercury vapors present inside the drum (well under 2 minutes).
Once your drum is full, call Air Cycle at 800.909.9709 or visit www.aircycle.com/services to schedule a pickup.

How can I order more filters or other replacement parts?

Visit www.aircycle.com or call 800.909.9709 to order more filters and replacement parts.

What safety precautions should I take when operating the Bulb Eater®?

Because of possible lamp breakage outside of the drum, suitable eye protection and protective gloves must be worn at all times while the machine is in operation. Proper ear protection (such as the provided ear plugs) should also be worn at all times when operating the Bulb Eater®. Wearing steel-toed safety shoes and disposal overalls is recommended when changing out drums or moving full drums around for storage or pickup. Take care when lifting and moving drums of crushed lamps, as a full drum can weigh over 500 lbs.
Before using the machine it is extremely important for the operator to review and understand all instructions and safety precautions. Refer to the Operation Instructions in this manual for detailed information and procedures.

How should I clean up broken bulbs?

1. Carefully scoop up glass fragments and powder using stiff paper or cardboard — DO NOT use a traditional vacuum or broom as these may spread the mercury-bearing phosphor powder.
2. Place fragments and powder in the drum with crushed lamps.
3. Use tape or a wet paper towel to clean up remaining fragments and powder.
4. Place tape or paper towel in a securely sealed zip-top bag and place bag on top of full drum of crushed lamps with spent filters.

What regulatory restrictions apply to operating the Bulb Eater®?

As a part of staying compliant with EPA and OSHA regulations, Air Cycle recommends that the operator of the Bulb Eater® should be trained on how to properly operate and maintain the equipment and crush no more than one full drum of lamps per 8-hour work shift in a well-ventilated work area.
Crushing lamps is a regulated activity by the United States Environmental Protection Agency. Air Cycle Corporation strongly urges all Bulb Eater® customers to thoroughly research all regulations that may apply to crushing, storage, shipping, labeling, employee training, and other crushing-related activities at their facility. Detailed environmental and regulatory information can be found in the Mercury Information appendix beginning on page 18.

Visit www.bulbeatertraining.com to complete the Bulb Eater Certified Training Program
For additional online Bulb Eater resources visit www.mybulbeater.com

For More Information on The Bulb Eater® and
Air Cycle Corporation visit www.aircycle.com

Replacement Parts & Accessories

Pricing is available online at www.aircycle.com/products/parts or by contacting Air Cycle at 800.909.9709

Filter Bags – 1st Stage

20 Industrial filter bags

HEPA Filter Cartridge – 2nd Stage

Highest Grade HEPA Filter Available

Filter Combo Kit

Contains 20 1st Stage Filter Bags & 1 HEPA Cartridge

Spinner Assembly

Loop Chain Used To Crush Lamps

Filter Combo Kit & Spinner Assymbly

Contains 20 1st Stage Filter Bags, 1 HEPA Cartridge, & Spinner

24” Entry Tube

Available for T5, T8, T10, T12, & T17 Lamps

48” Entry Tube

Available for T5, T8, T10, T12, & T17 Lamps

U-Tube Chute

Removable Stainless Steel Chute

CFL Chute

Removable Stainless Steel Chute

Safety Glasses

Should be worn at all times when using the Bulb Eater®

Safety Glove for Bulb Eater

Should be worn at all times when using the Bulb Eater®

Ear Plugs

Should be worn at all times when using the Bulb Eater®

U-Tube Chute Storage Rack

Attaches to entry tube rack, for storage of U-Tube Chute

Particulate Filtration System

Blue Vacuum Containing 1st & 2nd Stage Filters 40 c.f.m – 5.5 amps – 120 volts

Outlet Filter Hose

From Outlet of Blue Vacuum Housing to Beige Carbon Canister

Crusher Motor w/ Cable

Motor for Premium Model Bulb Eater 1/5 Horsepower – 2 amp – 120 volts

Control Panel

Safety Control Panel with Start Button, Stop Button, and Safety Sensors

55 Gallon Drum Dolly

Custom Built 55 Gallon Drum Dolly (800lb rating, skid-optimized)

55 Gallon Drum

Steel 55 Gallon Drum with Epoxy Lining

55 Gallon Drum Lid

Flat Steel Shipping Lid with Gasket, Locking ring, and Bolt for Tight Seal

55 Gallon Drum Locking RIng

Heavy Duty 12 Gauge w/ Bolt

VRS-(U) Premium Bulb Eater® Parts List

Part #	Description	U/M
	Machines	
330-005	BE 55 VRS Premium Bulb Eater®	EA
330-010	BE 55 VRS-(U) Premium Bulb Eater®	EA
	Entry Tubes	
55-483	T5 Entry Tube (24”)	EA
55-484	T5 Entry Tube (48”)	EA
55-476	T7 Entry Tube (24”)	EA
55-485	T8 Entry Tube (24”)	EA
55-486	T8 Entry Tube (48”)	EA
55-490	T10 Entry Tube (24”)	EA
55-495	T10 Entry Tube (48”)	EA
55-487	T12 Entry Tube (24”)	EA
55-488	T12 Entry Tube (48”)	EA
55-304	T17 Entry Tube (48”)	EA
55-305	T17 Entry Tube (24”)	EA
55-306	U-Tube Removable Chute	EA
	Filters	
55-310	Filter Bags (20 disposable 1st stage filters)	PKG
55-313	Power Filter Unit w/o Mounting Bracket 120v, 50-60hz	EA
55-325	Filter Cartridge (2nd stage HEPA grade)	EA
55-330	Filter Combo Kit (20 bag filters & one 2nd stage cartridge)	EA
55-333	Jumbo Filter Combo Kit (100 bag filters & 5-2nd stage cartridges)	EA
	Safety Equipment	
330-792	Plug for T7 Entry Tube	EA
330-793	Plug for T8 Entry Tube	EA
330-794	Plug for T5 Entry Tube	EA
330-795	Plug for T12 Entry Tube	EA
330-796	Plug for T10 Entry Tube	EA
330-798	Plug for T17 Entry Tube	EA
330-799	EPA Plug	EA
330-870	U-Tube Safety Cover	EA
55-480	U-Tube Upgrade Kit (new lid, chute and cover)	EA
	Bulb Eater Replacement Parts	
331-720	Power Cord	EA
55-132	7 Link Spinner Assembly w/ wrench	EA
55-340	Inlet Filter Hose w/ Fittings	EA
55-345	Outlet Filter Hose w/ Fittings	EA
55-420	Carbon, Activated 22lbs, Sulfur impregnated	EA
55-450	Carbon Canister w/carbon	EA
330-207	Carbon Canister, w/o Carbon	EA
55-400	55 Gallon Drum, Epoxy lined, plain lid & bolt ring clamp	EA
55-425	55 Gallon lid w/ gasket	EA
55-440	55 Gallon locking ring, heavy duty 12 gauge w/ bolt	EA
330-282	Lid w/ U-Tube Opening	EA

CFL Premium Bulb Eater® Parts List

Part #	Description	U/M
	Machines	
330-007	CFL Premium Bulb Eater®	EA
	Entry Tubes	
55-483	T5 Entry Tube (24”)	EA
55-484	T5 Entry Tube (48”)	EA
55-476	T7 Entry Tube (24”)	EA
55-485	T8 Entry Tube (24”)	EA
55-486	T8 Entry Tube (48”)	EA
55-490	T10 Entry Tube (24”)	EA
55-495	T10 Entry Tube (48”)	EA
55-487	T12 Entry Tube (24”)	EA
55-488	T12 Entry Tube (48”)	EA
55-304	T17 Entry Tube (48”)	EA
55-305	T17 Entry Tube (24”)	EA
55-307	CFL Removable Chute	EA
	Filters	
55-310	Filter Bags (20 disposable 1st stage filters)	PKG
55-313	Power Filter Unit w/o Mounting Bracket 120v, 50-60hz	EA
55-325	Filter Cartridge (2nd stage HEPA grade)	EA
55-330	Filter Combo Kit (20 bag filters & one 2nd stage cartridge)	EA
55-333	Jumbo Filter Combo Kit (100 bag filters & 5-2nd stage cartridges)	EA
	Safety Equipment	
330-792	Plug for T7 Entry Tube	EA
330-793	Plug for T8 Entry Tube	EA
330-794	Plug for T5 Entry Tube	EA
330-795	Plug for T12 Entry Tube	EA
330-796	Plug for T10 Entry Tube	EA
330-798	Plug for T17 Entry Tube	EA
330-799	EPA Plug	EA
55-392	CFL-Tube Safety Cover	EA
	Bulb Eater Replacement Parts	
331-720	Power Cord	EA
55-130	8 Link Spinner Assembly w/ wrench	EA
55-340	Inlet Filter Hose w/ Fittings	EA
55-345	Outlet Filter Hose w/ Fittings	EA
55-420	Carbon, Activated 22lbs, Sulfur impregnated	EA
55-450	Carbon Canister w/carbon	EA
330-207	Carbon Canister, w/o Carbon	EA
55-400	55 Gallon Drum, Epoxy lined, plain lid & bolt ring clamp	EA
55-425	55 Gallon lid w/ gasket	EA
55-440	55 Gallon locking ring, heavy duty 12 gauge w/ bolt	EA
55-386	Lid w/ CFL-Tube Opening	EA

Mercury Information

Controlled Crushing Regulations

Crushing lamps with the Bulb Eater® is considered "controlled crushing" and is regulated under both federal and state hazardous and universal waste regulations. The federal universal waste regulations do not authorize on-site crushing of fluorescent lamps but do allow the states to write rules that will permit crushing on-site. The States of Colorado, Florida, Maryland, Montana, New Mexico, Tennessee, Texas, and Virginia have all passed rules that allow persons to crush lamps on-site under the universal waste regulations.

In states that allow crushing and classify crushed lamps as universal wastes, persons can generally store their waste lamps on-site for up to one year, can ship waste lamps off-site with a bill of lading rather than a hazardous waste manifest, and need not include their lamps when calculating their hazardous waste totals.

Under state and federal hazardous waste regulations, controlled crushing is considered treatment. The hazardous waste rules typically require a person who treats wastes to obtain a permit. Federal and most state hazardous waste rules, however, exempt from the permit requirement persons who treat their wastes "within a drum, tank, or container." (See 40 CFR 262.34).

Air Cycle Corporation believes The Bulb Eater® systems fall squarely within this exemption and many states have acknowledged in letters to Air Cycle Corporation that the accumulation tank exemption applies to The Bulb Eater® systems. You should be aware, however, that the States of California, Maine, Massachusetts (SQG and LQG generators), Connecticut, Rhode Island, Missouri, Vermont, New Hampshire, West Virginia, Minnesota, Pennsylvania, Michigan, and New Jersey have more narrow exemptions to the permitting requirements (permits are often more easily obtained in Michigan and New Jersey). It is Air Cycle's understanding that persons within the states not listed above as requiring a permit or as regulated under universal waste regulations are authorized to crush lamps within general hazardous waste regulations. Air Cycle Corporation suggests you contact representatives of those states before proceeding with on-site crushing. Please note that regardless of whether the lamps are managed as universal or hazardous wastes, you must properly dispose of the crushed lamps preferably by shipping the crushed lamps to a permitted recycling facility.

Air Cycle Corporation will continue to work with state lawmakers and the Association of Lighting and Mercury Recyclers to promote legislation, which will authorize persons to crush lamps under universal waste regulations. Air Cycle Corporation and its customers know that persons are able to safely crush their lamps to reduce volume, minimize handling, cut costs, and create a safer work environment by managing their crushed lamps under either universal waste regulations or existing state hazardous waste regulations. For more information on regulations in your state, please visit www.aircycle.com/resources/state-regulations.

Why is mercury an environmental concern?

Mercury is a metallic element that can accumulate in living tissue. In sufficient concentrations, mercury may cause adverse health effects. Sources of mercury in the environment from human activity include coal-burning power plants, batteries, and fluorescent and HID lamps.

Small amounts of mercury are a necessary component in fluorescent and HID lamps, but when a lamp is broken, crushed, or dispensed in a landfill or incinerator, mercury may be released to the air, surface water, or groundwater. Considering this, it is a good policy to keep the mercury in fluorescent and HID lamps out of the solid waste stream by recycling.

How do I know if my waste is hazardous?
All generators of waste, except households, are responsible for determining if their waste is hazardous under current state and federal regulations. Hazardous wastes can either be included on specific lists or exhibit hazardous characteristics. This determination can be done by knowledge of the waste or by testing the waste.

What's hazardous?
Persons who generate wastes are responsible for determining whether their wastes are hazardous. One common method for determining whether a waste is hazardous is the Toxicity Characteristic Leaching Procedure (TCLP) test. The TCLP test is a laboratory test that simulates the potential leaching of hazardous wastes under conditions typically found in municipal solid waste landfills. If the concentration of mercury in water that is passed through a sample of crushed fluorescent lamp fragments exceeds 0.2 mg/liter, the crushed lamp fragments are classified as a hazardous waste. (See test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods," EPA Publication SW846 for more information about the TCLP procedures.)

In most cases, standard fluorescent lamps and lamp fragments fail the TCLP test and are considered hazardous wastes. Facilities should treat the spent lamps and lamp fragments as hazardous wastes unless they test the spent lamps and fragments and determine that the wastes are non-hazardous. Facilities should manage the spent lamps as hazardous waste according to applicable federal, state, and local requirements.

New low-mercury lamps have been introduced into the market. While these lamps may pass the TCLP test and be considered non-hazardous, some states - like Minnesota and Vermont - still prohibit persons from disposing of even these non-hazardous lamps in a solid waste landfill. You may want to talk with a State EPA representative to find out how you may handle spent lamps in your state.

Please note that regardless of whether the State in which you are located allows you to dispose of lamps in your dumpster with other non-hazardous trash, the lamps do contain mercury and mercury vapors are released into our environment when you throw lamps in the trash. Typically, the lamps break in the dumpsters, during transportation or in the landfill and release mercury into the air or groundwater. These hazardous releases are a risk to surrounding communities.

Facilities that throw their spent lamps in the trash thinking they are saving money may be mistaken. Throwing spent lamps in the trash may result in the person being held responsible for the cleanup of a remote and costly Superfund site. Because of the potential liability under Superfund, Air Cycle Corporation believes facilities that decide to recycle their spent lamps are making a smart decision that benefits not only the environment but also the bottom line.

What are universal wastes?
Universal wastes are specific hazardous waste streams that facilities can choose to manage in an alternative manner in place of the more complex hazardous waste requirements. These wastes are typically generated by many facilities and are often not properly managed under hazardous waste regulations.

Universal Wastes include:
Lamps – Including fluorescent, high intensity discharge (HID), sodium vapor, mercury vapor, neon, and incandescent lamps Batteries – Including spent dry cell and lead-acid batteries Pesticides – Including certain suspended, canceled, or unused pesticides Devices containing elemental mercury – Including thermostats, switches, thermometers, manometers, barometers, and various medical devices.

Does quantity matter?
Yes. RCRA (hazardous waste) requirements differ according to the amounts of hazardous waste generated per month by the facility. There are three main categories of hazardous waste generators:

Conditionally Exempt Small Quantity Generators (CESQG) are persons who generate 220 lbs. per month or less of all hazardous wastes combined (not just lamps!). These generators are exempt from most of the hazardous waste regulations, which include transportation, treatment, and disposal requirements. They must not, however, store more than 2200 lbs. of hazardous waste on site at any time and must dispose of their hazardous waste in facilities that are permitted or authorized to accept hazardous or non-hazardous wastes. Many states acknowledge CESQG exemptions for paperwork, but not for disposal. Many states do not allow CESQG to dispose of hazardous waste in a solid waste landfill.

Small Quantity Generators (SQG) are persons who generate 220 to 2200 lbs. of hazardous waste per month. These generators must keep proper records of the waste, report to EPA, and follow accumulation requirements. These generators can store up to 6 months without a storage permit.

Large Quantity Generators (LQG) generate more than 2200 lbs. of hazardous waste per month. These generators are subject to the full hazardous waste management requirements. These generators cannot store hazardous wastes on site for more than 90 days (3 months) without obtaining a storage permit.

There are 2 categories of Universal Waste handlers:

1. Small Quantity Handler - Generator who accumulates less than 11,000 lbs. of universal waste (batteries, pesticides, thermostats, or lamps) at any time.
2. Large Quantity Handler - Generator who accumulates more than 11,000 lbs. of universal waste (batteries, pesticides, thermostats, or lamps) at any time.

Universal Waste Storage Limits:

Both Small and Large Quantity Generators of Universal Waste can generally store their Universal Waste for one year. (For more information please contact your state Environmental Protection Agency or Air Cycle Corporation.)

Mercury Emissions
The disposal of mercury-containing fluorescent lamps and the potential for emissions is of concern because mercury is a highly toxic metal that bioaccumlates through the food chain. Mercury also has a low vapor pressure of 2 x 10-3 mm (at 25ºC) and readily evaporates to form mercury vapor at room temperature. Therefore, emissions of mercury in liquid or vapor form require health and environmental consideration. The volatilization is especially significant with respect to human health, as it results in ambient mercury vapor that can be absorbed into the human body through various pathways. These include direct inhalation, ingestion through surface contamination, and absorption through the skin of elemental mercury. Generally, excessive exposure to various forms of mercury has been shown to adversely affect the human central nervous system, lungs, kidneys, skin, and reproductive system.

Local Effects
Mercury is a primary irritant of the skin and mucous membranes. It may occasionally be a skin sensitizer in some individuals.

Systemic Effects
Acute (short-term) poisoning due to mercury vapors adversely affects the lungs primarily, in the form of acute interstitial pneumonitis, bronchitis, and bronchiolitis. Chronic (long-term) exposure to lower mercury levels over prolonged periods of time produces symptoms that can vary widely from individual to individual. These may include weakness, fatigability, loss of appetite, loss of weight, insomnia, indigestion, diarrhea, metallic taste in the mouth, increased salivation, soreness of mouth or throat, inflammation of gums, black line at the gums, loosening of teeth, irritability, loss of memory, and tremors of fingers, eyelids, lips, or tongue. In general, chronic mercury exposure produces four classical signs: gingivitis, excessive salivation, increased irritability, and muscular tremors. Rarely are all four seen together in an individual case. More extensive exposures to excessive mercury levels, either by daily exposures or one-time, can produce extreme irritability, excitability, anxiety, delirium with hallucinations, melancholia, manic-depressive psychosis, and adverse effects on the reproductive organs. Either acute or chronic exposure may produce permanent changes to affected organs and organ systems. Excessive exposure to various forms of mercury has been shown to adversely affect the human central nervous system, kidneys, and reproductive system.

Table 1 (page 22) provides a summary of the clinical importance of various forms of mercury.

Abrasion and Cut Hazards
The primary hazard resulting from handling broken lamps or crushing lamps is the potential release of airborne glass particulates resulting in skin, eye, and respiratory tract irritation with the possibility for cuts and lacerations to the eye, skin, and respiratory tract tissue upon contact. The eyes and skin can also be cut or lacerated by sharp glass edges or metal components contained in the crushed lamp waste.

Crushing Hazards
Perhaps the greatest potential for physical injury during the Bulb Eater® use other than laceration from broken glass or metal components is physical injury from movement or mishandling of the 55-gallon drums. Thus, forklifts or other suitable lifting devices equipped with drum grabbers and drum cradles must be used for transporting, moving, and positioning the lamp waste collection drums when filled with crushed fluorescent lamps. It is also extremely important that the manual be followed closely. Failure to operate the machine properly could lead to dangerous mercury vapor exposure. While boxing intact lamps intact, be careful to avoid breaking the lamps. When intact lamps break, unfiltered vapors are released.

Other
A review of manufacturers' fluorescent lamp Product Safety Data Sheets (PSDS) reveal there are no known health hazards from exposure to lamps that are intact. The PSDSs further disclose that no adverse effects are expected from occasional exposure to broken lamps but stated, "Avoid prolonged or frequent exposure to broken lamps unless there is adequate ventilation." The PSDSs indicate that the major hazard from an occasional broken lamp is the possibility of sustaining glass cuts.

Environmental Effects
Additionally, mercury is harmful to the environment. Mercury bioaccumulates in the food chain and as such poses many of the adverse effects described on the human body during the consumption of mercury contaminated food (e.g., predator fish – swordfish, tuna, etc.) Mercury in the environment is deposited and revolatilized many times, with a residence time in the atmosphere of a few days.

Most mercury-containing fluorescent lamps must be recycled or disposed as a toxic characteristic hazardous waste as defined in the Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA). This is due to the concentration of the mercury and/or other toxic metal content in the waste typically exceeding EPA's Toxicity Characteristic Leaching Procedure (TCLP) limits quantified by TCLP analytical tests.

The most environmentally sound and preferred disposal method for spent fluorescent lamps is recycling. Fluorescent lamp recycling allows the mercury to be separated from the other fluorescent lamp components (e.g. glass, metal, etc.) and collected for reutilization.

Table 1. Clinical Importance of Elemental and Inorganic Forms of Mercury

Form	Element State	Source	Absorption*	Primary Effects	Secondary Effects
Liquid Mercury	Hg^0	Thermometers; barometers; manometers; fluorescent lamps; switches; rectifiers; batteries (1)	Dermal contact – minimal absorption Ingestion – poor absorption	Poorly absorbed through GI tract (0.01%) or dermally; Systemic toxicity is rare	None
Mercury Vapor	Hg^0	Industrial	Inhalation – 80% absorbed Percutaneous – minimal absorption	Lungs, skin, eyes, gingiva (gums)	CNS**, kidneys (2)
Mercury Salts and Compounds	Hg^{+1} Hg^{+2}	Medicines; antiseptics; disinfectants; electric batteries; industrial compounds	Ingestion – 10% absorbed Dermal Contact – lethal doses can be absorbed by animals	Kidneys GI Tract	CNS

Table Abbreviations and Notes

CNS	Central Nervous System
GI	Gastroinstestinal
Hg	Atomic symbol for elemental mercury
*	In humans, the biologic half-life of all forms of mercury is 40-70 days
**	Crosses the blood-brain barrier
(1)	Breakage of any of these devices can result in the release and volatilization of liquid mercury in air as mercury vapor
(2)	Mercury accumulates in many tissues, but most importantly the brain and kidneys

Mercury Standards

Occupational Safety and Health Standards

The Occupational Safety and Health Administration (OSHA) regulation Title 29 of the Code of Federal Regulations (CFR) 1910.1000, Air Contaminants, Table Z-2, and an OSHA Compliance Directive Interpretation of 9 September 1996 regarding mercury exposure limits has set the Permissible Exposure (PEL) for all forms of mercury at 0.10 milligrams per cubic meter (mg/m3) of air (equivalent to 6.1 parts per billion, ppb). The Permissible Exposure Limit (PEL) is an eight-hour Time Weighted Average (TWA) concentration limit in air that nearly all workers can be exposed to without adverse health effects. The American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values for Chemical Substances and Physical Agents for 2001 has set recommended air standards for the elemental and inorganic forms of mercury (including inorganic mercury vapor) at 0.025 milligrams per cubic meter (mg/m3) as an eight-hour Threshold Limit Value (TLV) Time Weighted Average (TWA) concentration in air. A “Skin” notation is also designated with the standard indicating skin, eye and mucous membrane contact as a significant pathway of absorption. Table 2 provides a summary of mercury vapor exposure limits by various organizations including OSHA, ACGIH, the National Institute of Occupational Safety and Health (NIOSH) and the National Academy of Sciences (NAS).

Table 2. Mercury Vapor Exposure Limits Summary

OSHA PEL 8-Hour TWA (mg/m^3)	ACGIH TLV 8-Hour TWA (mg/m^3)	ACGIH 30-minute Excursion Limit (mg/m^3)	ACGIH Instantaneous Excursion Limit (mg/m^3)	NIOSH REEL-TWA (mg/m^3)	NIOSH IDLH (mg/m^3)	NAS SMAC 1-Hour TWA (mg/m^3)	NAS SMAC 24-Hour TWA (mg/m^3)
0.1 (Skin) [12.2 ppb]	0.025 (Skin) [3.0 ppb]	0.075 (Skin) [9.1 ppb]	0.125 (Skin) [15.2 ppb]	0.05 (Skin) [6.1 ppb]	10.0 [1,219 ppb]	0.08 [9.8 ppb]	0.02 [2.4 ppb]

Table Abbreviations and Notes

ACGIH	American Conference of Governmental Industrial Hygienists - 2002 Threshold Limit Values
IDLH	Immediately Dangerous To Life And Health
mg/m^3	Milligrams Per Cubic Meter (air)
NAS	National Academy of Sciences
NIOSH	National Institute of Occupational Safety and Health
PEL	Permissible Exposure Limit
ppb	Parts per billion (in air)
OSHA	Occupational Safety and Health Administration
REEL	Recommended Environmental Exposure Limit
Skin	Percutaneous (dermal) exposure (as route of exposure)
SMAC	Spacecraft Maximum Allowable Concentrations for Selected Airborne Contaminants (1996)
TLV	Threshold Limit Value
TWA	Time Weighted Average

Note: When maintained and operated properly, emissions from the Bulb Eater® should be well under all applicable mercury exposure requirements

The Bulb Eater® Filter Replacement Log

Loacation_____

New Drum Start Date	Date Drum Became Full	BLUE CASE FILTER: 1st Stage Filter Changed? *change twice per drum*	BLUE CASE FILTER: 2nd Stage HEPA Filter Changed? *change every 10 drums*
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____
		☐ YES ☐ NO Date_____	☐ YES ☐ NO Date_____

*Or as needed

Place spent filters on top of crushed lamps in full drum for recycling.

Label each new drum with a Hazardous or Universal Waste Label.
(Depending on applicable state regulations.)

**Save this form for your records*

Pickup Request Form

Schedule a Pickup online at www.aircycle.com/services _____

Pick-Up Request Form

AIRCYCLE CORPORATION

2200 Ogden Avenue, Suite 100 • Lisle, IL 60532
Tel (800) 909-9709 • Fax (866) 909-6725 • **www.aircycle.com**

Date: _____

Generator Pick-Up Location	**Generator Billing Information**
Company:	Company:
Address:	Address:
City/State/Zip:	City/State/Zip:
Contact:	Accounts Payable Contact:
Contact E-mail:	Accounts Payable Phone:
Contact Phone:	Accounts Payable Fax:
Contact Fax:	**EPA ID#:**
Alternate Contact/Phone:	**PO#:**

Transportation Requirements

A truck with a lift gate is required to pick up the material. Yes ____ No ____

A forklift available for loading the material onto the truck. Yes ____ No ____

The material will need to be manually loaded onto the truck. Yes ____ No ____

Note: manpower charges for loading may apply

A full size tractor-trailer can fit into the loading dock. Yes ____ No ____

Height and length restrictions for the loading dock are: _____

The material is stored: _____

Available Loading Hours: _____

Material To Be Delivered:

	Quantity
55 Gallon Steel Drums	
4' Fiber Drums	
4' Lamp Boxes	
8' Lamp Boxes	
5 Gallon Poly Pails	

Material To Be Picked Up:

Lamps:	Quantity
55 Gallon **Drums of Crushed Lamps**	
55 Gallon **Drums of Crushed CFL's**	
4ft. or Less Fluorescent Lamps	
5ft. - 8ft. Fluorescent Lamps	
9ft. or More Fluorescent Lamps	
U-Bend / Circular	
Compact w/o Ballast	
Compact w/Ballast	
HID (Mercury Vapor, Metal Halide, High-pressure Sodium)	
Shattershield / Coated	
Incandescent	
UV	

Batteries:	Weight
Mixed	
Alkaline	
Lead Acid	
NiCad	
NiMH	
Lithium	
Mercury	
Zinc Carbon	

Ballasts:	Weight
Non-PCB	
PCB	

The Material Is Packaged In:

	Quantity
Steel Drums (55 Gallon)	
Cardboard Boxes	
4' Fiber Drums (85 count)	
4' Fiber Drums (185 count)	
8' Fiber Drums (85 count)	
Poly Pails (5 Gallon)	
Other:	
Total of Pallets:	

Other Waste for Recycling Pick Up:

Office Machinery (E-scrap): _____

Other Mercury Containing Devices: _____

Special Instructions:

The marked material is to be properly identi_ed and prepared for transportation and tender in accordance with all applicable statutes, ordinances, permits, rules and regulations of the Federal, State, and Local governments in whose jurisdiction such material originates, passes through, or is tendered for delivery (certify for declare) under penalty of perjury that the foregoing is true and correct.

Please fill out this form completely and fax it to 866-909-6725 or e-mail to pickup@aircycle.com

Warranty Information

Air Cycle Corporation warrants The Bulb Eater® for one (1) year from the date of original purchase from the distributor or manufacturer against defects in workmanship and/ or materials under normal usage. This warranty does not cover damage resulting from shipping, negligent handling, misuse or lack of reasonable care. **Tampering with the machine and electronics will void this warranty**

Parts that prove to be defective during the one (1) year warranty period will be either repaired or replaced at the option of Air Cycle Corporation. The right is also reserved by Air Cycle Corporation to replace the product in lieu thereof.

The full remedy for breach of this warranty and sole obligation of Air Cycle Corporation is the repair or replacement of the defective Bulb Eater® at Air Cycle Corporation. Air Cycle Corporation shall have no liability whatsoever at any time for any personal injury or property damages or for any special, indirect, or consequential damages of any kind.

This warranty is strictly limited to its terms and is in lieu of any and all other of any kind understandings, warranties and conditions, written or oral, whether expressed or implied.

Please fill out the blanks below and return to Air Cycle Corporation. Upon receipt, the warranty will become effective until one (1) year from purchase date.

Thank you for your business. 4/16/2013

Company Name _____

Name of Contact _____

Address _____

City/State/Zip _____

Phone _____

Fax _____

Air Cycle Corporation

2200 Ogden Avenue, Suite 100

Lisle, IL 60532

US-800.909.9709 Outside US-708.344.7860

Fax: 866.909.6725

Shipping Date:_____ Serial #:_____

www.aircycle.com